Tobacco

The Youth Risk Behavior Survey includes questions on smoking frequency, intensity, history and cessation attempts; how cigarettes are obtained; smoking on school property; and smokeless tobacco and cigar use.

Overall Trends

Reported levels of tobacco use among Lancaster County teens declined from 1991 to 1999. There was a steady decline in general indicators for tobacco over the five biannual survey years (Figure 1).

In 1999, 61.9% of teens reported having ever tried cigarettes, even one or two puffs, during their lifetime. This represents decline since 1991, when 72.8% of teens surveyed reported having tried cigarettes.

There was also a clear decline in reported daily smoking. The percentage of teens reporting that they smoked every day during the past 30 days decreased from 18.3% in 1991 to 10.7% in 1999. Reports of current smoking (past 30 days) appear to have declined from 1991 to 1999, although the decline was not statistically significant and inter-year variation was considerable.

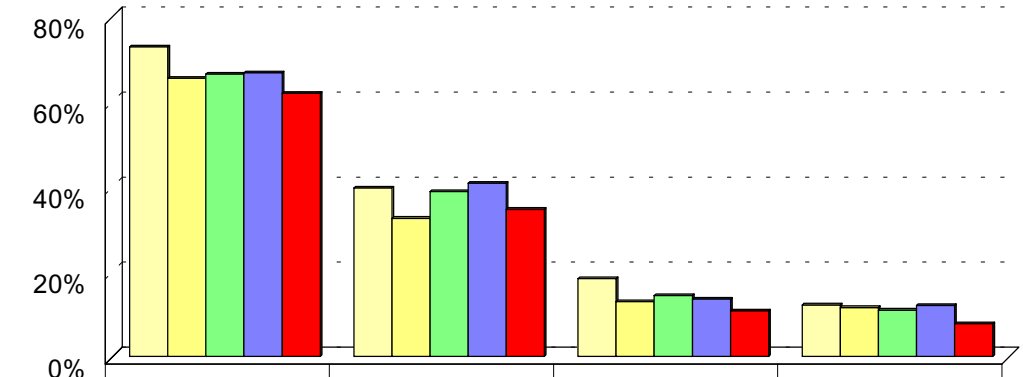
Reported smokeless tobacco use (past 30 days) also declined from 12.1% to 7.7% over the period. A new question in 1999 placed use of "cigars, cigarillos or little cigars" in the past 30 days at 20.1% of teens.

The decline in reported tobacco use, 1991 to 1999, occurred not only in the entire YRBS sample, but also among respondents of different grades, among males as well as females, and white and non-white teens. See the following pages for detail.

Local declines in indicators of tobacco use (those shown below and on the following pages) diverged from trend data available for Nebraska and the nation. Trend data for both Nebraska (1993 to 1997)[1] and U.S. (1991-1999)[2] indicated either little change or increases through 1997 on key tobacco indicators. An exception was smokeless tobacco use, for which both Lancaster County and U.S. indicators were in decline.

1 Tables published by Buffalo Beach Company, Lincoln, NE
2 Centers for Disease Control and Prevention: Youth Risk Behavior Trends Fact Sheet, <http://www.cdc.gov/nccdphp/dash/yrbs/trend.htm>; *MMWR* Surveillance Summaries 1999, 1997, 1995, 1993.

Figure 1: Tobacco Use*
High School Students



	Ever Tried Smoking	Smoked During Past 30 Days	Smoked Every Day Past 30 Days	Chew/Snuff Past 30 Days
1991	72.8%	39.6%	18.3%	12.1%
1993	65.4%	32.5%	12.9%	11.5%
1995	66.4%	38.8%	14.3%	10.9%
1997	66.7%	40.7%	13.5%	12%
1999	61.9%	34.6%	10.7%	7.7%

*Grade Adjusted

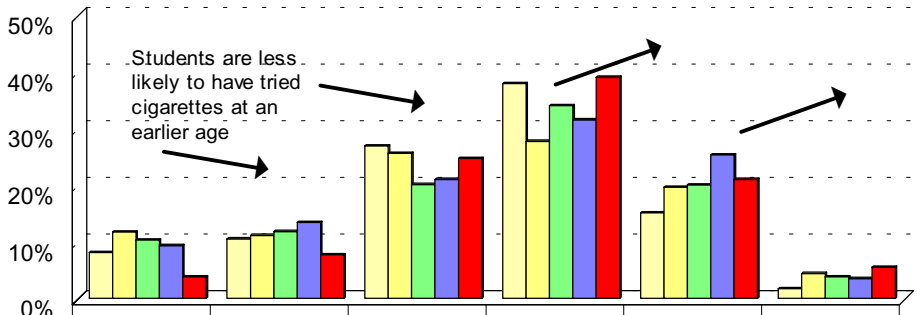
Age at First Cigarette Use; Intensity of Cigarette Use

In 1999, teens reported beginning smoking at a later age than in previous surveys (Fig. 2).

Among teens who reported ever smoking a whole cigarette (which declined 1991-1999), the percentage reporting their first cigarette at 12 years of age or younger declined from 1991 to 1999 **(Fig. 2)**. Accordingly, the percentage of those who reported first smoking at an older age (13 or older) increased over the period.

Teens in 1999 were 2.1 times less likely than in 1991 to report smoking their first whole cigarette at 8 years of age or younger.

Figure 2: Age at First Use*
High School Students Who Reported Ever Smoking a Whole Cigarette



	8 years or younger	9-10 years old	11-12 years old	13-14 years old	15-16 years old	17+ years old
1991	8.1%	10.5%	26.9%	37.9%	15.1%	1.7%
1993	11.7%	11.1%	25.6%	27.7%	19.6%	4.4%
1995	10.3%	11.8%	20.1%	34%	20%	3.8%
1997	9.3%	13.4%	21%	31.5%	25.3%	3.5%
1999	3.8%	7.7%	24.7%	39%	21%	5.5%

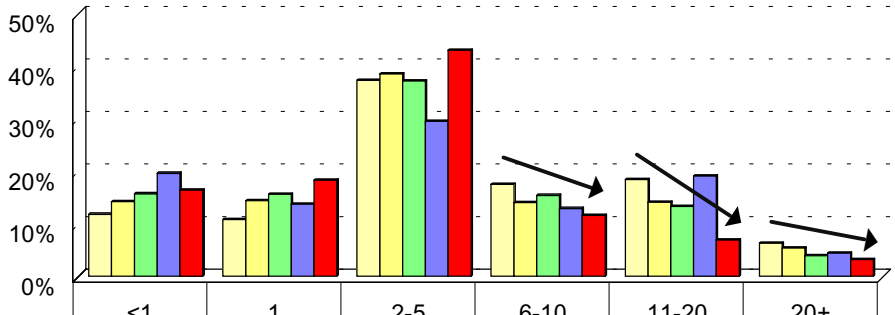
*Grade Adjusted

Teens in 1999 reported smoking fewer cigarettes per day than in previous survey years (Fig. 3).

Among teens who reported smoking in the past 30 days, the number of cigarettes teens reported smoking on the days they smoked declined during the 1990s. The average number of daily cigarettes reported by smokers declined from 5.6 in 1991 to 3.7 in 1999.

This decline in number of cigarettes smoked can also be seen in the declining percentage of teen smokers reporting smoking more than five cigarettes per day **(Fig. 3)**. These declines were strongest for the percentage reporting 6 to 10 cigarettes per day or 11 to 20 cigarettes per day.

Figure 3: Number of Cigarettes Smoked Per Day*
High School Students Who Reported Smoking During the Past 30 Days



	<1 Cigarette Per Day	1 Cigarette Per Day	2-5 Cigarettes Per Day	6-10 Cigarettes Per Day	11-20 Cigarettes Per Day	20+ Cigarettes Per Day
1991	11.8%	10.8%	37.3%	17.5%	18.4%	6.3%
1993	14.2%	14.4%	38.5%	14%	14.1%	5.4%
1995	15.7%	15.6%	37.2%	15.4%	13.3%	3.9%
1997	19.6%	13.7%	29.5%	12.9%	19.1%	4.4%
1999	16.4%	18.3%	43%	11.6%	6.9%	3.2%

* Number of cigarettes smoked per day, on the days they smoked Grade Adjusted

How Cigarettes are Obtained; Cessation Attempts; Smoking on School Property

In 1999, declines from previous years were evident in the percentage of teens who reported obtaining cigarettes by purchasing the cigarettes themselves (Fig. 4). Reported tobacco use on school property declined between 1995 and 1999 (Fig. 5). There was no change in reported smoking quit attempts (Fig. 6).

Teen smokers (those who smoked in the past 30 days) were 2.3 times less likely in 1999 than teens in 1995 to report purchasing cigarettes at a store. Among teens who reported smoking in the past 30 days, the percentage reporting having bought their cigarettes decreased dramatically over the four year period from 1995 (42.3%) to 1999 (18.1%) **(Fig. 4)**.

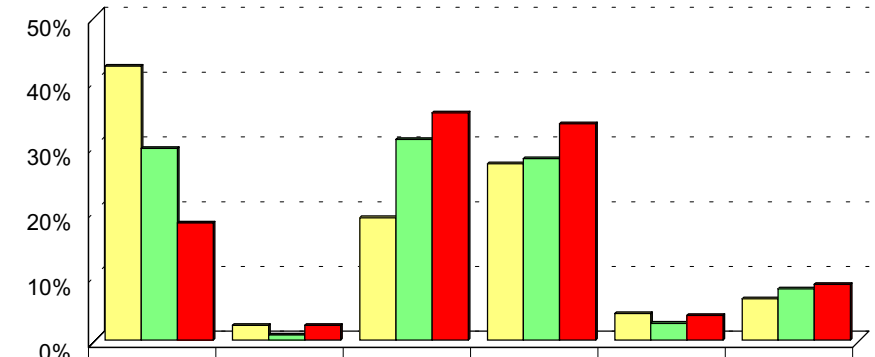
Reports by teens of having another person buy cigarettes for them increased from 1995 to 1999, at the same time as reports of buying cigarettes decreased **(Fig. 4)**. In 1995, teens most frequently repoted that they got their cigarettes by buying them themselves. By 1999, teens most frequently reported that they obtained their cigarettes by having another purchase for them, using the teen's money.

Both reports of cigarette use and smokeless tobacco use on school property (during the past 30 days) declined overall from 1993 to 1999 **(Fig. 5)**. Declines were strongest after 1995 for reported smokeless tobacco use and after 1997 for reported cigarette use on school property.

The percentage of teen smokers (smoked in the past 30 days) who reported quit attempts was higher in 1999 (60.1%) than in previous years but this was not a statistically significant increase **(Fig. 6)**.

Figure 4: How Cigarettes Are Usually Obtained*

High School Students Who Reported Smoking During the Past 30 Days

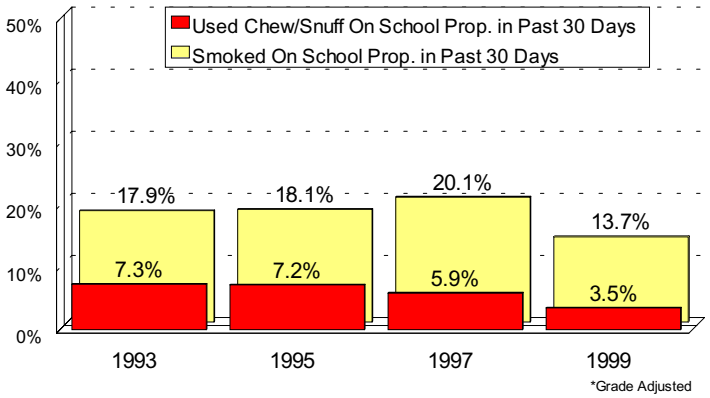


	Bought at Store	Vending Machine	Other Purchased For Me	Borrowed Them	Stole Them	Some Other Way
1995	42.3%	2.3%	18.9%	27.2%	4.1%	6.4%
1997	29.6%	0.8%	31%	28%	2.6%	7.9%
1999	18.1%	2.3%	35.1%	33.4%	3.8%	8.6%

*Grade Adjusted

Figure 5: Tobacco On School Property*

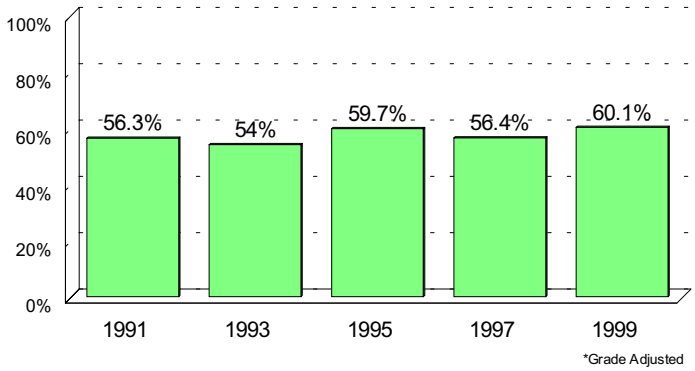
High School Students



*Grade Adjusted

Figure 6: Ever Attempted to Quit*

High School Students Who Reported Smoking During Past 30 Days



*Grade Adjusted

Differences by Gender

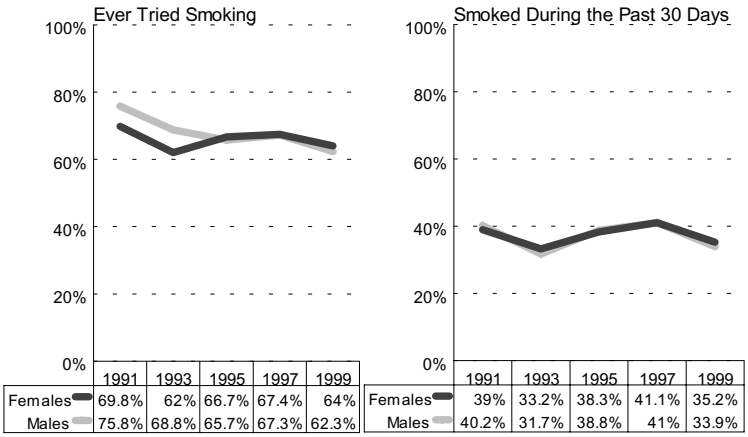
In 1999, female and male teens were similarly likely to report the standard indicators of tobacco use (Figs. 7 and 8), with the exception of higher male rates of smokeless tobacco use (Fig. 9). A decreasing percentage of males reported ever smoking in their lives. Reported daily smoking declined for both males and females.

From 1991 to 1999, a declining percentage (75.8% to 62.3%) of male teens reported ever trying cigarettes, but there was no statisically significant decline for females **(Fig. 7)**. In 1991, males were more likely than females to report having ever tried smoking. By 1999, males and females were equally likely to report having ever tried smoking. Female and male teens reported similar patterns in smoking during the past 30 days, with little change from 1991 to 1999.

Although it would appear that male teens have been more likely than females to report that they smoked every day for the past 30 days **(Fig. 8)**, these differences are not statistically significant. However, reported daily smoking declined over the decade among both males and females.

Males continued to report higher levels of smokeless tobacco use than females during the 1990s **(Fig. 9).** However, male reports of smokeless tobacco use in the past 30 days did decline from 21.7% in 1991 to 14.1% in 1999. In 1999, male teens remained 7 times more likely to than female teens to report using chew or snuff during the past 30 days.

Figure 7: Smoking Experience & Current Smoking*
High School Students

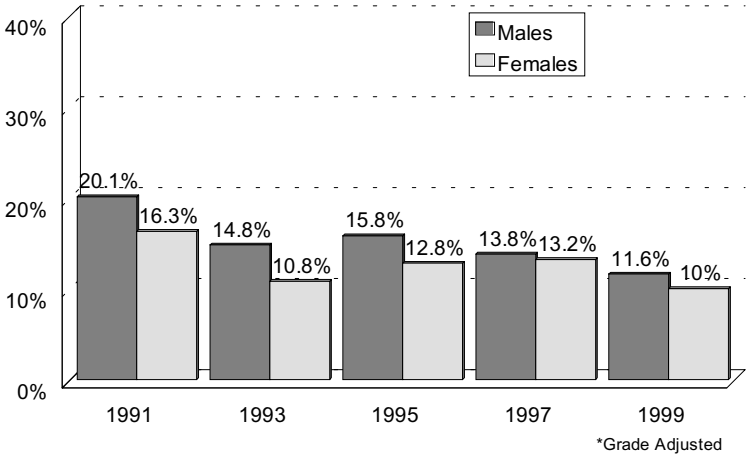


	1991	1993	1995	1997	1999
Females	69.8%	62%	66.7%	67.4%	64%
Males	75.8%	68.8%	65.7%	67.3%	62.3%

	1991	1993	1995	1997	1999
Females	39%	33.2%	38.3%	41.1%	35.2%
Males	40.2%	31.7%	38.8%	41%	33.9%

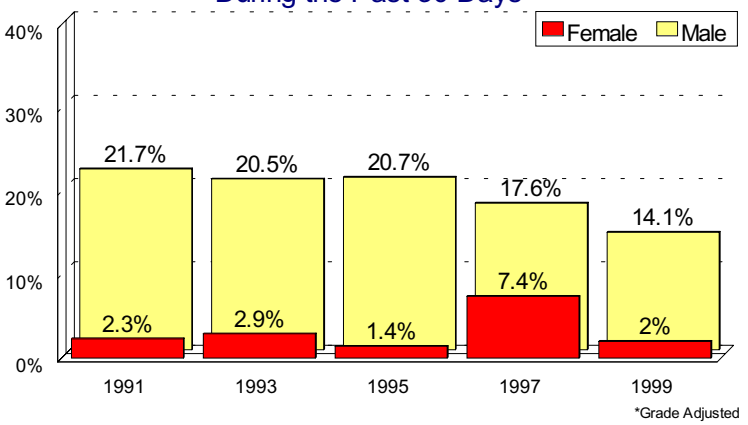
*Grade Adjusted

Figure 8: Daily Smoking, Past 30 Days*
High School Students



*Grade Adjusted

Figure 9: Smokeless Tobacco Use*
High School Students Who Reported Using Chew/Snuff During the Past 30 Days



*Grade Adjusted

Tobacco

Differences by Grade

As with other risky behaviors, teens in older grades reported tobacco use at higher rates than those in younger grades. Declines in tobacco use from 1991 to 1999 were particularly strong among ninth graders. Significant changes occurred in reported means of cigarette purchase.

As with teens overall, within each grade the percentage of teens reporting that they ever smoked a cigarette, even one or two puffs, appeared to decline from 1991 to 1999 **(Fig. 10)**, although only the 9th grade decline was statistically significant. In 1999, reports of ever having smoked varied from 56.9% among 9th graders to 67.6% among 12th graders.

The percentage of teens reporting that they smoked during the past 30 days also appeared to decline from 1991 to 1999 among all grades **(Fig. 11)**. Ninth graders displayed the largest and only statistically significant decline, from 32.9% to 24.3%.

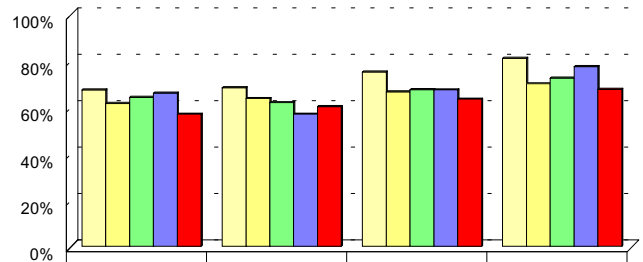
Declines also were apparent from 1991 to 1999 in the percentage of teens reporting that they smoked every day for the past 30 days **(Fig. 12)**, but these declines were statistically significant for 9th and 10th graders only.

The overall decline in reported teen use of smokeless tobacco **(Fig. 1)** was also apparent by grade, with the strongest and only statistically significant declines seen among 9th graders (7.8% to 3.9%) and 11th graders (14.7% to 7.1%).

As discussed earlier, the percentage of current smokers reporting that they bought cigarettes themselves dropped considerably from 1995 to 1999, 42.3% to 18.1% respectively **(Fig. 4)**. Among teens not of legal age to buy cigarettes (under 18 years old), this percentage dropped from 35.7% in 1995 to 9.6% in 1999.

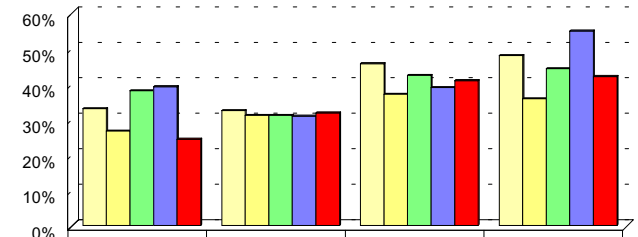
By comparison, national YRBS reports indicated a decline in direct cigarette purchase among those under 18 from 38.7% in 1995 to 23.5% in 1999. Local prevalence rates across the U.S. varied in 1999 nearly fourfold from 11.3% to 45.1%, with an average (median) of 25.8% buying their own cigarettes.

Figure 10: Ever Smoked, by Grade
High School Students



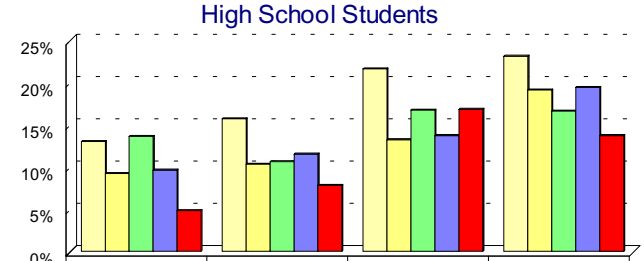
	9th	10th	11th	12th
1991	67.3%	68.3%	75%	81%
1993	61.5%	63.7%	66.5%	70%
1995	64.2%	61.9%	67.5%	72.4%
1997	65.9%	56.9%	67.4%	77.4%
1999	56.9%	60.2%	63.4%	67.6%

Figure 11: Current Smoking (Past 30 Days)
By Grade, High School Students



	9th Grade	10th Grade	11th Grade	12th Grade
1991	32.9%	32.4%	45.6%	47.9%
1993	26.6%	31%	37%	35.7%
1995	38%	31%	42.3%	44.2%
1997	39.1%	30.8%	38.9%	54.8%
1999	24.3%	31.7%	40.8%	42%

Figure 12: Daily Smoking, by Grade
(Smoked Every Day For the Past 30 Days)
High School Students



	9th	10th	11th	12th
1991	13%	15.7%	21.6%	23.1%
1993	9.2%	10.3%	13.2%	19.1%
1995	13.6%	10.6%	16.7%	16.6%
1997	9.6%	11.5%	13.7%	19.4%
1999	4.8%	7.8%	16.8%	13.7%

Differences by Race

From 1991 to 1999, there was little difference between white and non-white teens in reported smoking behaviors. Reported smoking behaviors declined in similar proportion among both groups over the decade, with declines in daily smoking particularly strong among non-white teens.

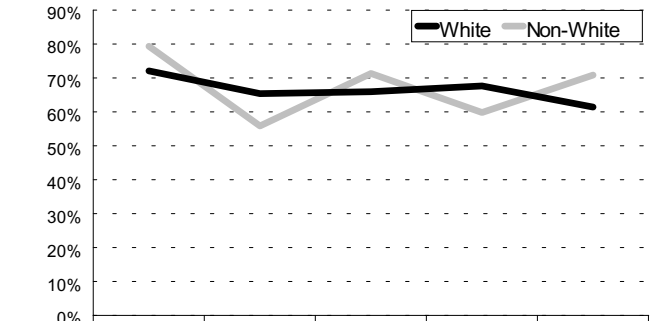
YRBS sample sizes for major race/ethnic groups (Black, Hispanic, American Indian or Asian) were not large enough to reliably compare these groups or examine trends over time. However, selected comparisons were feasible between white teens and those who may be classified as "non-white" -- of minority race or Hispanic ethnicity.

Over the 1990s, white teens became less likely to report that they had ever tried smoking **(Fig. 13)**. For non-white teens, a similar decline was apparent, but there was considerable variation from year to year and the overall decline 1991-1999 was not statistically significant. Reported smoking rates among white and non-white teens have been comparable during the period.

There was little change from 1991 to 1999 in the percentage of teens, both white and non-white, reporting that they smoked within the past 30 days **(Fig. 14)**. White teens were generally more likely than non-white teens to report smoking in the past 30 days.

Reported daily smoking declined noticeably among both white and non-white teens from 1991 to 1999 **(Fig. 15)**. The decline in reported daily smoking was greater among non-white than among white teens. Those reporting daily smoking in the past 30 days declined from 18.0% to 11.0% among white teens and from 21.5% to 9.3% among non-white teens.

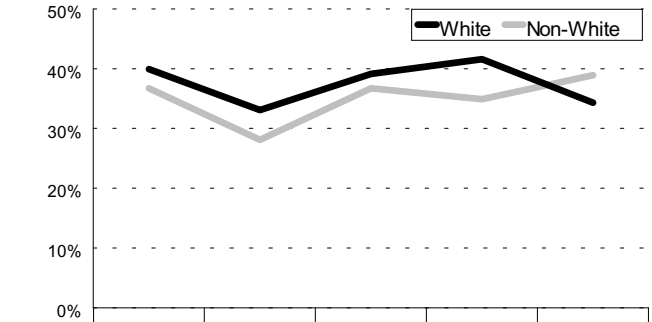
Figure 13: Ever Tried Smoking*
High School Students



	1991	1993	1995	1997	1999
White	72.1%	65.4%	66%	67.7%	61.4%
Non-White	79.4%	55.9%	71.3%	59.8%	70.9%

*Grade Adjusted

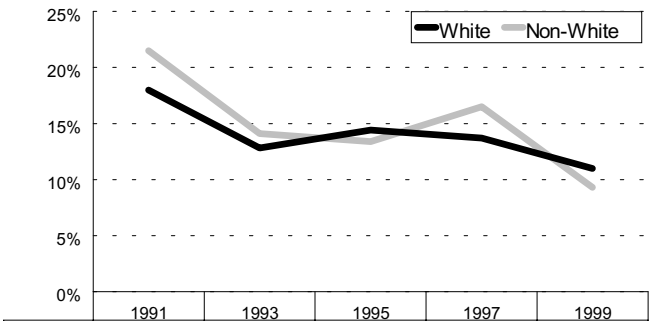
Figure 14: Current Smoking (Past 30 Days)*
High School Students



	1991	1993	1995	1997	1999
White	39.9%	33.1%	39.1%	41.6%	34.3%
Non-White	36.7%	28.1%	36.7%	34.9%	38.9%

*Grade Adjusted

Figure 15: Daily Smoking*
(Smoked Every Day During the Past 30 Days)
High School Students



	1991	1993	1995	1997	1999
White	18%	12.8%	14.4%	13.7%	11%
Non-White	21.5%	14.1%	13.4%	16.5%	9.3%

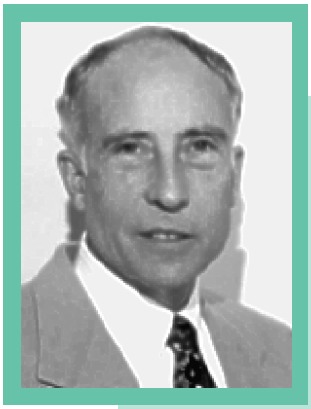
*Grade Adjusted

Tobacco

Health Objectives for the Year 2010: *Reduce disease, disability, and death related to tobacco use and exposure to secondhand smoke by preventing initiation of tobacco use, promoting cessation of tobacco use, reducing exposure to secondhand smoke, and changing social norms and environments that support tobacco use.*

Public Health Discussion

The life expectancy of people who smoke is decreased by an average of 14 years. Smoking during pregnancy is estimated to account for nearly 30% of low birthweight babies. As much as 14% of pre-term deliveries are a result of a mother's smoking, and smoking accounts for nearly 10% of all infant deaths. More than 2,700 Nebraskans lose their lives as the result of tobacco use each year. Additionally, hundreds of millions of dollars are drained from the State's economy each year through medical costs, lost productivity, and property damage. Even more disturbing is the fact that 35,000 Nebraska children currently younger than age 18 will die prematurely from tobacco use.[1]



"One of the best ways to reduce untimely deaths from heart disease is to prevent youth from using tobacco."

Christopher C. Caudill, M.D.
Cardiologist, Nebraska Heart Institute

Scientific knowledge about the health consequences of tobacco use has increased greatly since the release of the first Surgeon General's Report on Tobacco in 1964. It is well documented that smoking cigarettes causes heart disease, cancers of the lung, larynx, esophagus, pharynx, mouth and bladder, and chronic lung disease. Cigarette smoking also contributes to cancer of the pancreas, kidney, and cervix. Consequences of smoking during pregnancy include spontaneous abortions, low birthweight, and sudden infant death syndrome. Use of smokeless tobacco causes a a number of serious oral health problems, including cancer of the mouth, gum periodontitis, and tooth loss. Cigar use causes cancer of the larynx, mouth, esophagus, and lung.[2]

Exposure to secondhand smoke (environmental tobacco smoke, or ETS) has serious health consequences. Researchers have identified more than 4,000 chemical compounds in tobacco smoke, of which at least 43 cause cancer in humans and animals. 1996 study found that among non-tobacco users, 87.9% showed evidence of exposure to ETS, many of whom were not aware of their exposure. ETS is also linked to heart disease among adults. Not only do adults die from these cancers, but children suffer from lower respiratory tract infections as a result of exposure to ETS.[2]

Scientific evidence indicates that tobacco use and addiction usually begins in adolescence and that tobacco use may increase the probability that an adolescent will use other drugs. Since 90% of people who smoke indicate they started smoking before age 18, preventing tobacco use among Lincoln and Lancaster County youth must be a major focus of tobacco control programs.[1]

The five key stages of initiation and establishment of tobacco among young people are:

1. forming attitudes and beliefs about tobacco,
2. first trying tobacco,
3. continuing experimentation with tobacco,
4. regularly using tobacco,
5. becoming addicted to tobacco.

Youth are put at increased risk of initiating tobacco use by sociodemographic, environmental and personal factors. Sociodemographic risk factors include coming from a family with low socioeconomic status. Environmental risk factors include accessibility and availability of tobacco products, cigarette advertising and promotion, price of tobacco

products, perceptions that tobacco use is normal, peer's and siblings use and approval of tobacco, and lack of parental involvement. Personal risk factors include a lower self-image, the belief that tobacco use provides a benefit, and lack of ability to refuse offers to use tobacco.

The principal reason for continuation of tobacco use is the addictive nature of tobacco, and that addiction occurs in most smokers during adolescence. A study of high school seniors showed that 44% of daily smokers believed that in five years they would not be smoking, but a follow-up study showed that five to six years later 73% of those persons remained daily smokers. In 1995, it was estimated that over 68% of current smokers wanted to quit, but only 2.5% actually stop smoking permanently each year.[2]

The focus of efforts to reduce tobacco use in the United States has shifted from smoking cessation for individuals to population-based interventions that emphasize prevention of initiation and reduction of exposure to ETS. This change of emphasis from individual behavior to population-based strategies has come about because tobacco use appears to be susceptible to changes in the social environment.

Evidence from California and Massachusetts has shown that comprehensive programs can be effective in reducing tobacco consumption. Both states increased their cigarette excise taxes and designated a portion of the revenues for comprehensive tobacco-control programs. Data from these states indicates that:

1. Increasing taxes on cigarettes is one of the most cost-effective strategies to reduce tobacco consumption among adults and to preventing initiation of smoking among youth.
2. The ability to sustain this reduction in per capita consumption is greater when the tax increase is combined with an aggressive antismoking campaign.

There are six key components of tobacco-use prevention and control interventions:

1. prevention and restriction of minors' access to tobacco.
2. treatment of nicotine addiction,
3. reduction of exposure to secondhand smoke (ETS),
4. counter advertising and promotion,
5. economic incentives,
6. product regulation.

A Comprehensive Tobacco Control Program approach includes most of these key components.[3]

Parental Roles and Responsibilities:

Parents have tremendous leadership opportunities in shaping youth attitudes toward tobacco with open communications and shared concern for healthy lifestyles.

Role modeling positive healthy lifestyle behaviors help youth build a value system that can reduce desire to experiment with tobacco. Concerned parents who know their child is using tobacco can help their child quit or overcome their addiction to nicotine. Parents who are sensitive to the effects of environmental tobacco smoke will help youth limit exposure. Parents can be leaders in community issues focused on advertising, access to tobacco, and product regulation.

Community Roles and Responsibilities:

Lincoln and Lancaster County residents can greatly assist in reducing the tobacco health risk including:

1. Support strict enforcement of laws governing the sale of tobacco to minors.
2. Support penalties to both minors and merchants who break these laws.
3. Support efforts that regulate tobacco advertising, especially that which is appealing to minors.
4. Encourage funding of health education campaigns for both youth and adults.
5. Discourage Environmental tobacco smoke wherever possible, especially areas frequented by children and youth.
6. Support increasing excise taxes on tobacco products.
7. Be a role model to youth, including the mentorship opportunities to talk to teens with factual information.

Policy Makers' Roles and Responsibilities:

Public Health Infrastructure: Tobacco Free Coalitions have been established in 16 communities in Nebraska, including the Tobacco Free Lincoln Coalition.

Health agencies are joining forces to introduce and pass legislation to protect the public from environmental tobacco use and increase the tax on tobacco. Communities are creating comprehensive programs to prevent children from starting to use tobacco. The Center for Disease Control's August 1999 guide, "Best Practices for Comprehensive Tobacco Control Programs," and the Smokeless Nebraska Coalition's November 1999 "Combating Tobacco Use in Nebraska" provide excellent guidance in developing such comprehensive plans.

The Lincoln-Lancaster County Board of Health has passed a Tobacco Control Policy. The Lincoln-Lancaster County Health Department is committed to being an aggressive leader in implementing comprehensive tobacco prevention plans to address the 4 "A"s of tobacco control - Access, Appeal, Affordability and Clean Air. Lincoln Lancaster County Health Department will continue to work closely with Nebraska Health and Human Services, Health Education, Inc., the Lancaster County Medical Society, the Nebraska Dental Association, the American Heart Association, the American Lung Association, the American Cancer Society and the Nebraska Smokeless Coalition to decrease the rate at which children start to use tobacco and to protect the public from ETS. Local schools, churches, and health agencies must continue to maintain the tobacco agenda to assure sufficient resources to impact the tobacco health risk.

References:

1. Lincoln-Lancaster County Health Department. "Healthy People 2010: Health Objectives for the Year 2010 for Lincoln and Lancaster County Nebraska". January, 2000

2. U.S. Department of Health and Human Services. "Healthy People 2010 Objectives: Draft for Public Comment." September, 1998

3. U.S. Department of Health and Human Services Center for Disease Control and Prevention, "Best Practices for Comprehensive Tobacco Control Programs". August, 1999